

wherein said EL power supply further includes means for adjusting the light intensity of the EL panel to a desired intensity.

*135*  
*At 2*  
*cont.*

36. The distributed emergency building lighting system as set forth in claim 35 wherein said control means further includes self-diagnostic testing means for verifying operational conditions of the lighting system including the detection of an electrical short circuit and an electrical open circuit of an EL panel coupled to said control means.

#### **REMARKS**

Applicants note the Examiner's holding that the declaration filed May 10, 2001 has been found to be acceptable and the acknowledgement of the claim for priority under 35 U.S. C. § 119(e) to the U.S. Provisional Application Serial No. 60/203,878 filed May 12, 2000. Applicants also note the Examiner's holding that the declaration filed May 10, 2001 is acceptable.

#### Objection to Drawings

Applicants note the objection to the patent drawings and have provided with this response, a red-line proposed drawing correction and seeks the Examiner's approval for the proposed drawing correction. No new matter is entered as a result of the proposed drawing correction. Additionally, the specification has been amended as set forth above to identify the corresponding reference numerals from the drawing to the specification.

#### Allowable Subject Matter

Applicants note the Examiner's holding that claims 7-17 are objected to as being dependent upon a rejected base claim but would be allowable if rewritten in independent form including all of the limitations of the base claim and intervening claims. Claim 7 is rewritten

above in independent form including the limitations of the base claim and intervening claims as new claim 35. Claim 8 is rewritten as claim 36 and depends from claim 35.

Claim Rejections of 35 U.S.C. § 103

Applicants have carefully studied the references and arguments advanced by the Examiner in rejecting the claims of this application and respectfully request favorable reconsideration. Claims 1-17 are rewritten above as new claims 18-34 to more clearly point out that which Applicants consider the invention and to further patentably and technically distinguish over the references cited by the Examiner.

The Examiner rejects claims 1 and 3 as being unpatentable over the Kim U.S. Patent 6,265,833 and argues Kim discloses a lighting apparatus comprising an electro-luminescent panel (5) means (4) for providing electrical power to illuminate the panel and control means (3) electrically coupled to the electrical power means (4) and the panel (5) for illuminating a pre-determined area in response to an ambient intensity level as an input stimulus for energizing the panel referencing Figure 1. The Examiner argues that Kim does not limit the lighting apparatus for use within a building as claimed however the Examiner considers the difference in application of the two systems is not sufficient to differentiate the claimed apparatus from the prior art. The Examiner further argues that Kim's lighting system can be applied wherever needed as long as the surrounding of the lighting system can be sensed and uses an input to stimulate the lighting system concluding that such a modification is considered as a routine skill in the art.

Applicants respectfully traverse the Examiner's application of Kim and the stated reasoning to the claimed invention. Kim deals with the control of backlighting for a display by sensing the ambient light to adjust the driving voltage and current to increase or decrease the backlight intensity to enable the viewer to better view the display. Further, Kim's apparatus is limited in area

claimed in the present invention. The Conley reference is directed specifically toward overhead fluorescent area lighting providing emergency lighting only for the conditions of a line power outage and not for emergency input triggering events such as fire or other emergencies that are capable of producing smoke. Additionally, Applicants' invention is patentably and technically distinguishable over the Conley reference since Conley teaches an area lighting application and is not specifically intended to nor is there a disclosure, suggestion or teaching to direct or lead toward an exit, along hallways or down stairs to safety as contemplated in Applicants' invention.

Additionally, Applicants' invention overcomes the problem of illumination of areas specifically areas containing smoke from any cause whether fire or otherwise. Conley in addition to others that provide overhead lighting for emergencies have the problem that such lighting is practically useless and adds to the danger of the emergency condition because the overhead light can mask light from an exit sign by making the smoke glare or reflect. In contrast, Applicants' invention provides an EL panel stripe located on a floor or on a wall or near the floor in the predetermined designated lighting area in accordance with emergency lighting code requirements and since the strip lighting is always visible, the egress path is clearly shown regardless of the smoke intensity. Accordingly, Applicants respectfully submit that Applicants' invention as set forth in the claims is patentably and technically distinguishable over Conley for at least the reasons stated above.

The Examiner rejects claims 2, 4 and 5 as being unpatentable over Conley in view of Gross U.S. Patent 5,343,375 alleging Conley discloses the claimed invention except for a path marking of egress of low-level lighting and argues that Gross teaches an emergency egress illumination and marker light stripe door comprising a stripe (40) providing a path of marking egress located near a building floor as well as light emitting devices (46, 50) lighting the exit sign located near a door referencing column 4, lines 6-65 and column 5, lines 1-32. The Examiner argues it would be

obvious to one of ordinary skill at the time of the invention to utilize the electro-luminescent stripe as taught by Gross and Conley.

Neither Conley nor Gross utilize an electro-luminescent panel as contemplated by the present invention. The electro-luminescent panel as contemplated by the present invention is powered from a power source clearly specified for that purpose in the specification. The electro-luminescent panel term as used in the specification is clearly defined as having specific characteristics in accordance with Applicants' electro-luminescent panel power supply which is referenced at page 9 of the specification. Accordingly, Applicants submit that the illumination contemplated by the references cannot provide the required emergency illumination as disclosed and claimed in Applicants' invention.

The characteristics of the EL panel stripe contemplated in Applicants' invention and is known to those skilled in the electro-luminescent panel art, permits the lamp to be several hundred feet long with typically low current and yet provide uniform brightness. For example, 200 feet of a one-half inch wide EL panel lamp as manufactured by the assignee of the present invention draws approximately one-half ampere of current whereas in contrast, 200 feet of the LED strip lamp as specified and described in Gross would draw 180 amperes. The high current is impractical which dictates that the Gross lamp would be limited to lengths of less than 20 feet per lamp. If the LEDs were connected in series in order to alleviate the high current problem, a more serious problem arises wherein the failure of any one LED will blank out an entire section or the entire lamp. A 200 foot LED strip lamp of Gross would contain approximately 5400 LEDs with 10,800 electrical connections vs. one EL panel stripe with two electrical connections as possible with Applicants' invention.

and size to backlight displays used in portable electronic equipment such as cell phones. Furthermore, Kim turns off the backlit display specifically in response to a bright ambient light whereas the present invention the EL panel stripe illuminates from a non-illuminated state to an illuminated state for a predetermined designated lighting area of one or more conventional lighting system areas within the building in response to an emergency input triggering event. As explained in the specification, the emergency input triggering event is of a must fail safe type in which the input triggering event or input stimulus is a signal from a smoke detector, pull alarm, a power failure, or other such alarm type signal. The idea of the present invention is to turn lights on for emergency egress and to provide the proper illumination at the floor level in accordance with emergency lighting code requirements. There is no teaching, suggestion or disclosure in Kim to provide illumination of a predetermined designated lighting area within the building in response to an emergency input triggering event nor is there any disclosure, teaching or suggestion in Kim that the Kim device could provide emergency lighting as defined and disclosed by the claims and specification in Applicants' invention.

The Examiner rejects claims 1 and 6 as being unpatentable over Conley, U.S. Patent 6,285,132 arguing that Conley discloses an emergency lighting test system as shown in Figure 1 comprising an electro-luminescent device (13), means (10, 10a, 11, 11a, and 19) for providing electrical power to the device (13) and control means (17) electrically coupled to the electrical power means (19) and the device (13) for illuminating a predetermined area in response to an input stimulus (22). The Examiner admits that Conley does not disclose an electro-luminescent panel as claimed however the Examiner argues it would be a matter of design choice to select any form of a luminescent device. The Examiner argues that a fluorescent lamp which emits a visible light when excited by an electrical power would perform equally well as the electro-luminescent panel as

The Examiner states that the reasons for the indication of allowable subject matter is that the prior art fails to suggest a distributed emergency building lighting system using a power supply for driving an electro-luminescent panel or in the power supply further comprising means for adjusting the light intensity of the electro-luminescent panel. The Examiner also states the prior art fails to include self diagnostic testing means for detecting electrical short circuit and electrical open circuit of an electro-luminescent panel as defined and set forth in the claims. Accordingly, it seems that the Examiner's statements of reasoning for allowable subject matter requires that an electro-luminescent panel is an essential element of the Applicants' invention and distinguishes Applicants' invention both patentably and technically from the various illumination devices of the Kim, Conley and Gross references.

Applicants note the remaining art made of record and not relied upon and accordingly has not considered those references in this response.

Applicants respectfully submit that the claims of this application are patentably and technically distinguishable over the references and are now in condition for allowance and earnestly solicit such allowance at an early date.

Applicants request the Examiner contact Applicants' attorney at the below listed number should there by any questions regarding the foregoing or other matters associated with the prosecution of this application.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version With Markings to Show Changes Made".

Respectfully submitted,

Date: December 17, 2002

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**Version With Markings to Show Changes Made****In the Specification:**

Please replace paragraph on page 9, beginning at line 17:

-- Illumination or emergency low-level path marking 150 of the predetermined designated area 160 is provided by a strip of electro-luminescent (EL) lamp material approximately two inches wide or of any suitable width which is mounted along the floor or in the vicinity of the baseboard area of a room or other area to provide a visual delineation of the path of egress in an emergency condition or to illuminate an "EXIT" sign placed at floor level. The illumination of the area 160 to be lit by the emergency lighting system is provided from an electro-luminescent (EL) panel strip 100 that is mounted on the wall along the baseboard of a room or other such area required to be lit in accordance with the code requirements to place the required amount of illumination intensity on the floor surface. The emergency lighting system of the present invention overcomes another disadvantage associated with the "bug eye" type emergency lighting systems in which the bug eye lights are typically mounted near the ceiling. In the event of a fire, smoke rises and diffuses and reduces the illumination capabilities of a bug eye emergency light. In contrast, mounting the electro-luminescent (EL) strip on the wall along the baseboard provides light on the floor area where the light is required and such illumination would not be affected by smoke until the room is substantially smoke-filled. In addition, providing the electro-luminescent (EL) strip along the baseboard allows existing building structures to be retrofitted with emergency lighting at a substantial cost savings and time savings over conventional emergency lighting systems using dedicated electrical circuits. Additionally, the emergency lights can be placed specifically where needed such as in interior, windowless rooms, staircase hallways and other such areas. --

In the Claims:

**Please delete claims 1-17.**

**Please add new claims 18-36.**

18. A distributed emergency lighting system for use in a building having one or more conventional lighting system areas powered from a source of alternating current (AC) voltage, said distributed emergency lighting system comprising:

an electroluminescent (EL) panel stripe;

a source of direct current (DC) voltage;

means electrically coupled to said DC voltage source for providing electrical power to said EL panel strip; and

said electrical power means further comprising control means for illuminating automatically without operator intervention said EL panel stripe from a non-illuminated state to an illuminated state for a predetermined designated lighting area of the one or more conventional lighting system areas within the building in response to an emergency input triggering event.

19. The distributed emergency lighting system as defined in claim 18, wherein said EL panel stripe is illuminated in said predetermined designated area for providing low-level path marking indicating a visual delineation of the path of egress.

20. The distributed emergency lighting system as defined in claim 18, wherein said EL panel stripe is illuminated in said predetermined designated area for providing floor illumination within

a prescribed distance from at least one wall of a room in accordance with emergency lighting code requirements.

21. The distributed emergency lighting system as defined in claim 19, wherein said EL panel stripe is a stripe of indeterminate length located on a floor and on a wall at or near the floor in the predetermined designated lighting area of the one or more lighting areas accordance with emergency lighting code requirements.

22. The distributed emergency lighting system as defined in claim 19, wherein said EL panel stripe is illuminated to light an exit sign at or near the floor in accordance with emergency lighting code requirements.

23. The distributed emergency lighting system as defined in claim 18, wherein said power means further comprises an EL power supply having an input coupled to the line side of an electrical switch supplying commercial AC power to the conventional lighting located in said designated area and to said DC voltage source in the absence of AC power at the line side of said electrical switch.

24. The distributed emergency lighting system as defined in claim 23, wherein said EL power supply further includes means for adjusting the light intensity of the EL panel to a desired intensity.

25. The distributed emergency lighting system as defined in claim 18, further including self-diagnostic circuit testing means electrically coupled to said electrical power means and said EL panel stripe and said control means for verifying operational conditions of the lighting system

including the detection of an electrical short circuit and an electrical open circuit of an EL panel coupled to said control means.

26. The distributed emergency lighting system as defined in claim 25, wherein said self-diagnostic circuit testing means includes detection of a normal operating circuit of an EL panel coupled to said control means.

27. The distributed emergency lighting system as defined in claim 25, wherein said self-diagnostic circuit testing means includes detection of an inoperative electrical power means.

28. The distributed emergency lighting system as defined in claim 25, wherein said DC source further comprises a battery and said self-diagnostic circuit testing means further comprises testing means for determining the charge capacity of the battery.

29. The distributed emergency lighting system as defined in claim 28, wherein said battery testing means further comprises means for connecting a test electrical load to the battery for a predetermined short time interval;

means for sensing the battery voltage during the short time interval that said test electrical load is connected, and

means for providing an alarm indication in response to the battery voltage falling below a predetermined voltage value during the voltage sensing time interval.

30. The distributed emergency lighting system as defined in claim 29, wherein the test electrical load is in the range of 10 to 20 times the electrical load of the emergency building lighting system.
31. The distributed emergency lighting system as defined in claim 30, wherein said predetermined short time interval is in the range of 10 to 30 seconds.
32. The distributed emergency lighting system as defined in claim 25, further comprising means for activating said self-diagnostic testing means in accordance with a predetermined time schedule.
33. The distributed emergency lighting system as defined in claim 25, further comprising means for manually activating said self-diagnostic testing means.
34. The distributed emergency lighting system as defined in claim 25, further comprising means for activating said self-diagnostic testing means in response to the conventional lighting system located in said designated area being turned on and off.
35. A distributed emergency building lighting system comprising:
  - an electroluminescent (EL) panel;
  - means for providing electrical power to illuminate said EL panel; and
  - control means electrically coupled to said electrical power means and said EL panel for illuminating a predetermined designated area within the building in response to an input stimulus;

wherein said power means further comprises an EL power supply having an input coupled to the line side of an electrical switch supplying commercial AC power to the conventional lighting located in said designated area and to a DC voltage source in the absence of AC power at the line side of said electrical switch, and

wherein said EL power supply further includes means for adjusting the light intensity of the EL panel to a desired intensity.

36. The distributed emergency building lighting system as set forth in claim 35 wherein said control means further includes self-diagnostic testing means for verifying operational conditions of the lighting system including the detection of an electrical short circuit and an electrical open circuit of an EL panel coupled to said control means.